

National Energy Technology Laboratory

Phase II Regional Carbon Sequestration Partnerships

Description

The U.S. Department of Energy (DOE) funds seven Phase II Regional Carbon Sequestration Partnerships that are developing carbon sequestration technologies to capture and permanently store greenhouse gases. The partnerships form the centerpiece of DOE's carbon sequestration program and include more than 240 organizations in 40 U.S. states, three Indian nations, and four Canadian provinces. Within their respective regions, the partnerships are—

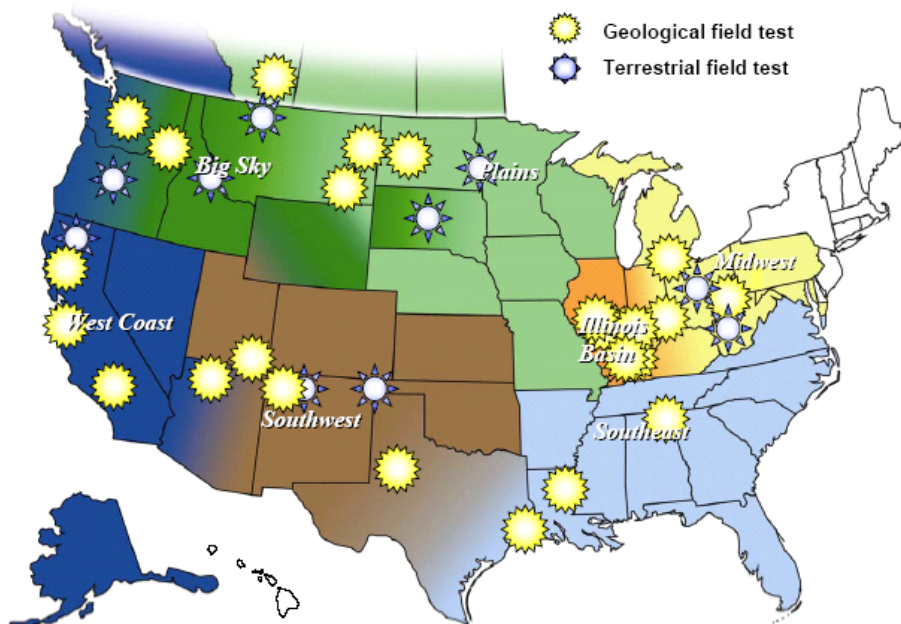
- Examining the opportunities and potential challenges for carbon sequestration.
- Pursuing field projects to validate sequestration technologies.
- Building a coalition of energy professionals, scientists, and others who understand and support carbon sequestration.

Background

The President's Global Climate Change Initiative calls for an 18 percent reduction in greenhouse gas intensity by 2012. Carbon sequestration—a family of methods for capturing and permanently isolating carbon dioxide and other greenhouse gases—is an integral part of the Bush Administration's efforts for reaching this goal.

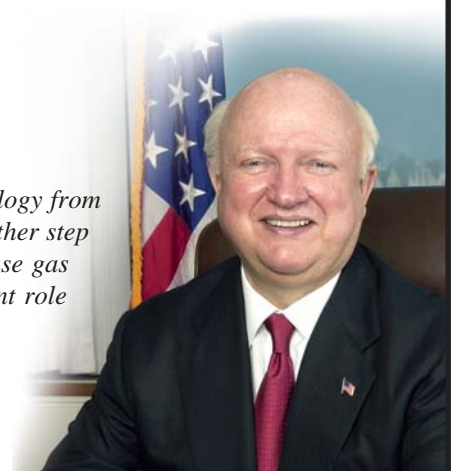
DOE selected seven Phase I Regional Carbon Sequestration Partnerships in August 2003 to ensure that America is fully prepared to implement sequestration as a climate change option. Primarily a screening and scoping exercise, the first phase is recognized as an unqualified success.

Plans for a second phase of the Regional Sequestration Partnerships initiative were announced in late 2004, and the seven Phase II partnerships were selected in June 2005.



"By moving carbon sequestration technology from the laboratory to the field . . . we are another step closer to significantly reducing greenhouse gas emissions while maintaining the important role coal plays in America's energy mix."

Samuel W. Bodman
Secretary of Energy
June 9, 2005





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Activities

The Phase II partnerships are building on the accomplishments of the first phase of the Regional Sequestration Partnerships initiative through the following activities:

- Twenty-five field tests of carbon dioxide storage in geologic formations.
 - Four saline/enhanced oil recovery reservoir sequestration tests
 - Six saline reservoir sequestration tests
 - Six coal seam sequestration tests with enhanced coalbed methane recovery
 - Eight depleted oilfield sequestration tests with enhanced oil recovery
 - One depleted gas field sequestration test with enhanced gas recovery
- Ten tests of enhanced carbon uptake in terrestrial ecosystems.
 - Four agriculture/rangeland management
 - Four forestry
 - One mine-land restoration
 - One wetland/prairie restoration
- Activities to support the field tests, including efforts to better understand and model the behavior of stored carbon and concurrent testing of measuring, monitoring, and verification systems.
- Further work characterizing sequestration opportunities within each region, with a focus on settings amenable to large-scale deployment.
- Continued public and industrial outreach activities.

Funding

DOE required that the partnerships include significant industry cost-sharing in their Phase II proposals. Partnerships responded with more than \$45 million, over \$20 million from industry, to augment \$100 million in Federal funding for the 4-year Phase II effort.

	Lead Organization / Website	Proposed Field Test Reservoir Types
	California Energy Commission www.westcarb.org	Saline formations Depleted gas reservoirs Depleted oil reservoirs Coal seams Terrestrial
	New Mexico Institute of Mining and Technology www.southwestcarbonpartnership.org	Saline formations Depleted oil reservoirs Coal seams Terrestrial
	Montana State University www.bigskyco2.org	Basalt formations Depleted oil reservoirs Terrestrial
	University of North Dakota, Energy & Environmental Research Center www.undeerc.org/pcor	Depleted oil reservoirs Coal seams Terrestrial
	University of Illinois, Illinois State Geological Survey www.sequestration.org	Saline formations Depleted oil reservoirs Coal seams
	Battelle Memorial Institute http://198.87.0.58	Saline formations Terrestrial
	Southern States Energy Board www.secarbon.org	Saline formations Stacked oil/saline Coal seams